

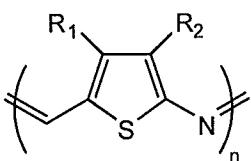
**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of the Claims:**

Claims 1-28 (cancelled)

29. (previously presented) An electrically conducting polymer comprising the formula:



wherein:

R<sub>1</sub> and R<sub>2</sub> are independently selected from the group consisting of H, CN, C<sub>1</sub>-C<sub>10</sub> alkyl group and CO<sub>2</sub>R<sub>4</sub>;

R<sub>4</sub> is a C<sub>1</sub>-C<sub>10</sub> alkyl group; and

n is an integer ranging from 4 to 50 000.

30. (previously presented) The electrically conducting polymer of claim 29, wherein said polymer is treated with a doping agent.

31. (previously presented) The electrically conducting polymer of claim 30, wherein said doping agent is selected from the group consisting of a p-type dopant and an n-type dopant.

32. (previously presented) The electrically conducting polymer of claim 31, wherein said p-type dopant is selected from the group consisting of chlorine, bromine, iodine, AlCl<sub>3</sub>, FeCl<sub>3</sub>, GaCl<sub>3</sub>, CF<sub>3</sub>CO<sub>2</sub>H, HCl, H<sub>2</sub>SO<sub>4</sub>, CH<sub>3</sub>SO<sub>3</sub>H.

33. (currently amended) The electrically conducting polymer of claim 32, wherein said n-type dopant is selected from the group consisting of sodium naphthalide,  $\text{SbF}_5$ ,  $\text{AsF}_5$ ,  $\text{PF}_5$ ,  $\text{AgX}$ ,  $\text{NO}_2\text{X}$ , and  $\text{NO}_2\text{X}$ , wherein X is a non-nucleophilic anion.
34. (cancelled)
35. (currently amended) The electrically conducting polymer of claim [[34]] 33, wherein the non-nucleophilic anion is selected from the group consisting of  $\text{BF}_4^-$ ,  $\text{PF}_6^-$ ,  $\text{SbF}_6^-$ ,  $\text{ClO}_4^-$ , sulfonic acid anions and carboxylic acid anions.

Claims 36-51 (cancelled)